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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,530	10/01/2003	Chandra Bontu	PAT 2717-2	5356
26123 7590 11/01/2007 BORDEN LADNER GERVAIS LLP Anne Kinsman WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA			EXAMINER PHAN, HANH	
			ART UNIT 2613	PAPER NUMBER
			NOTIFICATION DATE 11/01/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipinfo@blgcanada.com  
aarmstrongbaker@blgcanada.com  
akinsman@blgcanada.com

## Office Action Summary

**Application No.**

10/674,530

**Applicant(s)**

BONTU, CHANDRA

**Examiner**

Hanh Phan

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-35 is/are allowed.
- 6) ☒ Claim(s) 1,2,17,18,27 and 36 is/are rejected.
- 7) ☒ Claim(s) 3-16 and 19-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 08/17/2007.

#### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 2, 17, 18 and 36 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,775,631 (van Schyndel) in view of Bessios (US Patent No. 7,110,683).

10/674,530 (Claims 1, 17 and 36)	US Patent No. 6,775,631 (Claims 1, 4 and 5)
A system for detecting digital	a system for detecting digital

symbols carried in a received optical signal, comprising:  a functional element operative to receive a stream of samples sampled from an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample, thereby to produce a stream of processed samples;	symbols carried in a received optical signal, comprising:  a functional element operative to receive a stream of an electrical signal derived from the received signal and to evaluate a non-linear function of each received electrical signal, thereby to produce a stream of processed electrical signal (Claims 1, 4 and 5);
A detector operative to render decisions about individual symbols present in the received signal on the basis of the stream of processed samples.	a detector operative to render decisions about individual symbols present in the received signal on the basis of the stream of processed electrical signal (Claims 1, 4 and 5).

van Schyndel differs from claims 1, 17 and 36 in that he fails to teach a sampler for sampling the electrical signal. However, Bessios teaches a sampler for sampling the electrical signal (i.e., Figs. 1 and 3, col. 3, lines 22-50, col. 4, lines 23-67 and col. 5, lines 1-40). Based on this teaching, it would have been obvious to one having skill in the art at the time invention was made to incorporate the sampler for sampling the electrical signal as taught by Bessios in the system of van Schyndel. One of ordinary skill in the

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art would have been motivated to do this since allowing improving recovery of the transmitted signal and reducing the distortion of the signal and signal error.

Regarding claims 2 and 18, as similarly as described above, van Schyndel discloses wherein the non-linear function is substantially the square root (see claims 4 and 5).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 17, 27 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessios (US Patent No. 7,110,683) in view of Bryant (Pub. No.:US 2003/0063663).

Regarding claims 1, 17, 27 and 36, referring to Figures 1 and 3, Bessios teaches a system for detecting digital symbols carried in a received optical signal, comprising:

an element (i.e., spectral shaping detector 205, Fig. 1) operative to receive a stream of samples sampled from an electrical signal derived from the received signal to produce a stream of processed samples (i.e., Figs. 1 and 3, col. 3, lines 22-50, col. 4, lines 23-67 and col. 5, lines 1-40);

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a detector (i.e., spectral shaping detector 205, Fig. 1) operative to render decisions about individual symbols present in the received signal on the basis of the stream of processed samples (i.e., Figs. 1 and 3, col. 3, lines 22-50, col. 4, lines 23-67 and col. 5, lines 1-40).

Bessios differs from claims 1, 17, 27 and 36 in that he fails to specifically teach a functional element operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample. Bryant teaches a functional element operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample (i.e., Figs. 2, 3a-3c, 5a-5f and 7a, pages 3 and 4, paragraphs [0028]-[0035] and page 5, paragraph [0038]). Based on this teaching, it would have been obvious to one having skill in the art at the time invention was made to incorporate the functional element operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample as taught by Bryant in the system of Bessios. One of ordinary skill in the art would have been motivated to do this since allowing improving recovery of the transmitted signal and reducing the distortion of the signal and signal error.

***Allowable Subject Matter***

6. Claims 2-16 and 19-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

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limitations of the base claim and any intervening claims and overcome the double patenting.

7. Claims 28-35 are allowed.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
**HANH PHAN**  
**PRIMARY EXAMINER**